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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,210	10/11/2001	Victor F. Petrenko	393551	1402

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EXAMINER

VAN, QUANG T

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 06/24/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/976,210

Applicant(s)

PETRENKO, VICTOR F.

Examiner

Quang T Van

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9, 12-16 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 4, 10, 11 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Broussoux et al (US 5,172,024). Broussoux discloses a device to eliminate ice formed on the surface of an optical or radio-electric window comprising a first electrode (20); a second electrode (20'), the first electrode (20) and the second electrode (20') defining an interelectrode space (10) between the first electrode and the second electrode, the first electrode and the second electrode defining an interelectrode distance (10) that separates the first electrode and the second electrode; an AC power source (21) for providing an AC voltage across the first and second electrodes having a frequency greater than 1000Hz (col. 8, lines 30-31).

3. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al (US 5,389,766). Takahashi discloses a rail snow melting by electromagnetic induction heating comprising the step of applying an alternating electric field proximate to the ice interface for generating a resistive AC current in the interfacial ice (col. 1, lines 5-13).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broussoux et al (US 5,172,024) in view of Zieve (US 4,895,322). Broussoux discloses substantially all features of the claimed invention except the AC power source provides an AC voltage in range of about from 10 volts to 500 volts. Zieve discloses an AC power source provides an AC voltage in range of about from 10 volts to 500 volts (col. 4, lines 10-12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Broussoux an AC power source provides an AC voltage in range of about from 10 volts to 500 volts as taught by Zieve in order to provide sufficient power for deicing system.

6. Claims 3, 6, 12-13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broussoux et al (US 5,172,024) in view of Bird (US 4,732,351). Broussoux discloses substantially all features of the claimed invention except an electrical insulator located in the interelectrode space. Bird discloses an electrical insulator (12) located in the interelectrode space (Fig. 3, between electrodes 34 and 36). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Broussoux an electrical insulator located in the

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interelectrode space as taught by Bird in order to maintain the potential different between the electrodes.

7. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broussoux et al (US 5,172,024) in view of Weinstein (US 6,239,601). Broussoux discloses substantially all features of the claimed invention except the interelectrode distance has a value in a range of about from 50  $\mu\text{m}$  to 500  $\mu\text{m}$ . Weinstein discloses an interelectrode distance has a value in a range of about from 50  $\mu\text{m}$  to 500  $\mu\text{m}$  (col. 4, lines 10-13). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Broussoux an interelectrode distance has a value in a range of about from 50  $\mu\text{m}$  to 500  $\mu\text{m}$  as taught by Weinstein in order to control the applying voltage. With regard to claims 8 and 9, It would have been obvious to one having ordinary skill in the art to modify the interelectrode distance has a value less than 50  $\mu\text{m}$  or has a value greater than 500  $\mu\text{m}$ . Doing so would control the applying voltage, since the less value for the less applying voltage and the more value for the greater applying voltage.

8. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (US 5,389,766) in view of Broussoux et al (US 5,172,024). Takahashi discloses substantially all features of the claimed invention except the step of applying an alternating electric field having a frequency greater than 1000Hz. Broussoux discloses the step of applying an alternating electric field having a frequency greater than 1000Hz (col. 8, lines 30-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Takahashi an alternating

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electric field having a frequency greater than 1000Hz as taught by Broussoux in order to provide a sufficient electric field to melt the ice.

9. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (US 5,389,766) in view of Broussoux et al (US 5,172,024) and further in view of Zieve (US 4,895,322). Takahashi and Broussoux disclose substantially all features of the claimed invention except the AC power source provides an AC voltage in range of about from 10 volts to 500 volts. Zieve discloses an AC power source provides an AC voltage in range of about from 10 volts to 500 volts (col. 4, lines 10-12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize Takahashi and Broussoux an AC power source provides an AC voltage in range of about from 10 volts to 500 volts as taught by Zieve in order to provide sufficient power for deicing system.

10. Claims 4, 10, 11, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or suggest the insulator comprises a nonconductive rubber windshield wiper blade as recited in claim 4; the first electrode and second electrode comprise a layer of conductive glass as recited in claims 10-11; and the second electrode comprises a conductive rubber windshield wiper blade as recited in claim 17.

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12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Zieve et al (US 5,143,325) discloses a deicing system for aircraft and other objects. Pickles et al (US 2,947,841) discloses an antenna deicing.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang Van whose telephone is 703-306-9162. The examiner can normally be reached 8:30 to 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa Walberg can be reached on 703-308-1327. The fax phone numbers for this group is 703-782-9302.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-308-0861.



QV

June 19, 2003



QUANG T. VAN  
PATENT EXAMINER